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“Step Out From the Old to the New”

IS 12497-4 (1988): Plastic Cartridges for Shot Guns, Part 4: Plastic Base Wad [PGD 28: Arms and Ammunition for Civilian Use]

“ज्ञान से एक नये भारत का निर्माण”

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



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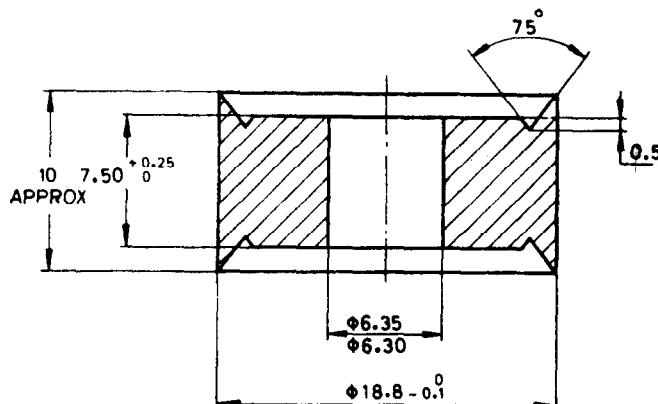
Indian Standard

SPECIFICATION FOR PLASTIC CARTRIDGES FOR SHOT GUNS

PART 4 PLASTIC BASE WAD

1. Scope — Covers the dimensions, material, manufacture, inspection, test requirements and packing of plastic base wad for plastic cartridges for shot guns.

2. Dimensions — As shown in Fig. 1.



All dimensions in millimetres.

FIG. 1 DIMENSIONS OF PLASTIC BASE WAD FOR PLASTIC CARTRIDGES FOR SHOT GUNS

3. Material — Suggested material is high impact polystyrene having the following characteristics:

a) Density	1.04 + 0.01 g/cm ³
b) Melt flow index	3 - 5 g/10 min at 200° C/5 kg
c) Tensile strength at break	230 kg/cm ² , Min
d) Elongation at break	45 - 55 percent
e) Vicat softening point	75°C, Min
f) Izod impact strength (notched 6.25 mm bar)	10 - 12 kg cm/cm
g) Colour	Natural

3.1 The material shall be neutral in character and shall not contain water soluble chloride calculated as sodium chloride not more than 0.05 percent. It shall also be non-toxic and shall not react with nitrocellulose/nitroglycerine propellants during long storage.

4. Workmanship — The base wad shall be manufactured from granules having characteristics as mentioned in 3 by injection moulding in highly finished moulds having facilities for gas escape. It is preferable to feed the moulds from the sides at the middle to avoid/reduce non-uniformity due to shrinkage. The finished component shall be free from fins, seam lines, blow holes, warps, etc, by carefully removing the runner.

5. Inspection and Tests — The suppliers shall ensure the quality of the product by checking samples from the continuous running production from time to time and shall not keep any dimension or characteristic to a lower level.

5.1 On submission of the bulk, the consignee will do the sampling inspection as specified in IS : 2500 (Part 1)-1973 'Sampling inspection tables: Part 1 Inspection by attributes and by count of defects (first revision)' for dimensional and visual parameters with AQL as Critical = 0, Major = 0.65 and Minor = 1.5.

5.2 Defects Classification

<i>Nature of Defect</i>	<i>Critical</i>	<i>Major</i>	<i>Minor</i>
a) Blow holes more than 2 mm in size	@		
b) External diameter, height or length beyond tolerance by 0·05 mm	@		
c) Internal diameter, height or length beyond tolerance by 0·05 mm	@		
d) Heavy burr on external diameter	@		
e) Heavy burr on internal diameter	@		
f) Eccentricity of internal diameter to external diameter more than 0·15 mm	@		
g) External diameter, height or length beyond tolerance within 0·05 mm		@	
h) Internal diameter, height or length beyond tolerance within 0·05 mm		@	
j) Minor burr on external diameter		@	
k) Minor burr on internal diameter		@	
m) Thickness beyond tolerance		@	

5.3 Pull off Test — The average pull off value of brass head after fitting 10 random samples from each consignment in plastic body tube as per IS : 12497 (Part 3)-1988 'Specification for plastic cartridges for shot guns: Part 3 Body tube' shall not be less than 90 kg and individual cases not less than 85 kg and the base wad shall not show any visible crack.

5.4 Chemical Test — Shall be done to ensure that no additive has been used along with the basic material which will contain chlorine or chloride compounds or which will affect the neutral nature of the basic material.

6. General Requirements — Shall be as per IS : 12497 (Part 1)-1988 'Specification for plastic cartridges for shot guns: Part 1 General requirements'.

7. Marking — Each base wad shall be marked legibly and indelibly with manufacturer's identification mark. Each box shall also be marked legibly and indelibly with the manufacturer's name, supply order number, from, to, quantity and weight.

8. Packing — Packing shall be done in suitable corrugated boxes or wooden boxes lined with corrugated paper or felt, etc, and also separated after every 10 cm of layer to prevent damaging of the edges. Over all shape and size of the box shall be decided as agreed to between the purchaser and the supplier.

EXPLANATORY NOTE

This standard is being issued in the following parts, Part 1 covering general requirements for shot gun plastic cartridges and subsequent parts covering the plastic components:

- Part 1 General requirements
- Part 2 Blank cartridges
- Part 3 Plastic body tube
- Part 4 Plastic base wad
- Part 5 Plastic power piston